

BACH Rulemaking – Summation of Issues Addressed During Regulatory Advisory Panel Meetings. (March 23, May 9, June 13, 2016)

BACTERIA

BEACH Act requires States with coastal recreation waters to adopt new or revised criteria and standards to protect recreation uses no later than 36 months after publication by EPA. New bacteria criteria were published by EPA October 2012.

The 2012 criteria offer 2 options for intended levels of acceptable risk; 36 theoretical illnesses per 1,000 exposed swimmers or the slightly more conservative 32 theoretical illnesses per 1,000 exposed. Both are intended to be protective of primary contact recreation. Each illness rate has a geometric mean and a Statistical Threshold Value (STV). The geometric mean is a never-to-be-exceeded criterion, and 10% or less exceedance of the STV, both based on all monitoring data collected during a period of up to 90 days. Current VA standards use a geometric mean value corresponding to the 36/1,000 illness rate. DEQ staff preference would be to adopt the 2012 criteria that have the same illness rate basis and geometric mean as current criteria so as to maintain continuity with existing bacteria Total Maximum Daily Loads (TMDL).

EPA expects that states and tribes receiving BEACH grants for bacteria monitoring under Clean Water Act section 406 will select a beach notification threshold (Beach Action Value or BAV). VDH plans to complete the alternative BAV justification letter and submit for EPA approval prior to Dec. 2016, along with the updated Virginia criteria adoption schedule to be in compliance with EPA Beach grant requirements. The BAV is used for beach notifications and not intended as enforceable criteria. VDH intends to maintain 104 cfu/100 ml as the BAV which is the current single sample maximum in the VA WQS regulation.

It was suggested that maybe the BAV should be in the WQS. DEQ staff believe to do so would likely be confusing to the general public and possibly be a source of conflict regarding assessments and TMDLs. Another option would be to include language in the water quality standards regulation referring the reader to the VDH regarding use of a BAV for swimming advisories.

Another issue discussed was where to apply the criteria. DEQ staff presented 2 options:

- Apply only to “coastal recreation waters” and maintain current criteria for all others;
- Or to all State waters

Applying the criteria only to “coastal recreation waters” would necessitate defining them in the WQS. All waters in VA are designated as primary contact waters and it was suggested that all waters should receive the same level of protection.

AMMONIA

The nationally recommended criteria for freshwater are more stringent than VA's current criteria because of inclusion of very sensitive species (mussels) in the toxicity calculations. Concerns: Implementation costs for additional wastewater treatment (particularly for smaller facilities), compliance issues (especially schedules for plant upgrades), and need for coordination of more stringent ammonia discharge limits with current and/or future nutrient limits.

Suggestions regarding implementation to accommodate compliance issues:

- Changes to permit regulation to allow for longer compliance schedules (ammonia specific).
- Changes to WQS regulation to allow for longer compliance schedules (ammonia specific).
- Increased use of economic variances particularly for smaller treatment facilities.
- Reasonable potential to discharge determination utilize a default pH lower than 9.

Compliance schedules in VA permit regs allow a reasonable period of time, not to exceed the term of the permit, for the discharger to attain compliance with the water quality-based limitations. VPDES permit terms are 5 years. Federal regulation language regarding schedules of compliance does not specify a particular time limit for compliance but states, "...as soon as possible".

Some RAP members are concerned that moving from a discrete length of time to a non-specific endpoint would result in less assurance of timely implementation of permit limits to meet the criteria. It was also mentioned that without regulation language specifically addressing ammonia criteria, that non-specific time limit would be applicable to permit limit compliance for any pollutant. Other members favor changing permit regulation language to mirror that of federal regulation and they view that course of action as neutral and in the spirit of federal regulations. Suggested language to amend WQS section 155 (ammonia criteria) to address permit compliance schedules for ammonia limits as well as ammonia-specific variances was provided by VAMWA.

CADMIUM

Cd criteria were released in time for proposal development; they are included in this rulemaking. The updated freshwater criteria incorporates more recent toxicity data for the protection of rainbow trout and the possibility exists of applying criteria that has been recalculated without the trout data to non-trout waters. VAMWA contends that VA should use the recalculated 'rainbow trout absent' criteria because VA has no naturally reproducing rainbow trout populations.

Criterion	Acute (ug/L at hardness 100)	Chronic(ug/L at hardness 100)
EPA (2016) ; criterion lowered to protect rainbow trout	1.8	0.72

EPA (2016) ; criterion <u>NOT</u> lowered to protect rainbow trout	2.7	0.72 (no change to chronic)
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VA does have populations of self-sustaining rainbow trout populations. There are also numerous streams the game and fish department manages as ‘put-and-grow’ that are stocked with fingerling trout and left to grow out. The current VA WQS cadmium criteria values were calculated with rainbow trout toxicity data included.

HUMAN HEALTH

Human Health criteria changes are due to updated fish consumption rate, human body weight, drinking water intake, health toxicity values, bioaccumulation factors, and relative source contributions. Some values increased; some decreased. VAMWA believes VA should adopt the criteria without using the Relative Source Contribution (RSC) factor in the calculation of those criteria. They believe use of the RSC is arbitrary and unnecessary. Use of the RSC had gone through peer review, public comment, and is now official EPA policy. Further, it is doubtful EPA would provide flexibility towards States should they opt not to include it in the derivation of human health criteria.

Updated criteria for benzene resulted in a range of values due to inherent uncertainties in the human health studies used to generate the criteria.

- PWS = 5.8 to 21 µg/L
- Non-PWS = 160 to 580 µg/L

There about 24 active permits with permit limits for benzene. These range from small gas stations to large industrial permits. Recent monitoring data from these indicate all concentrations of benzene in discharged effluent to be less than quantitation limits of 1 to 5 parts per billion (ppb). VDH staff suggested a precautionary approach and use the lower and presumably more protective criteria concentrations. The Maximum Contaminant Level (MCL) for benzene in drinking water is 5 µg/L and the criterion range is 5.8 – 21 ug/L.